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**Emerging Markets Finance**  
**Overview of the special issue: Issues of international capital flows**  
**M. Bussière and K. Phylaktis**

**1. Introduction**

The global financial crisis saw an unprecedented collapse of international capital flows after years of rapid increase reflecting the rising globalisation over the previous decade. Global capital flows increased rapidly from less than 7% of world GDP in 1998 to over 20% in 2007, but suffer large reversals in late 2008, with bank credit flows being hit the hardest due to their sensitivity of risk perception. However, the retrenchment of capital flows in emerging economies was a short lived compared to that experienced in developed economies (Milesi-Ferretti and Tille, 2011). Capital flows to emerging economies picked up again, partly as a result of the monetary policies pursued by the US, UK, and more recently the Eurozone in the aftermath of the crisis, which depressed yields in the developed world, encouraging investors to seek higher rewards in emerging economies. However, the expected tapering by the Fed and the slowing down of economic growth in emerging economies caused a surge in emerging market capital outflows which reached one trillion in the between June 2014 and July 2015.

This volatility of capital flows has raised a lot of interesting questions, such as: Does the distinction between *gross* and *net* capital flows matter for evaluating the impact of capital flows? Has the reversibility of portfolio and bank flows changed in recent years? What are the drivers of international portfolio flows, are they country specific (“pull”) or global (“push”) ? Do domestic investors respond differently to financial stress compared to foreign investors? How do capital flows affect the different components of aggregate equity

and bond markets? What are the implications of global financial shocks, such as the Fed's quantitative easing (QE) and tapering on capital flows to emerging markets? At the same time the size and volatility of cross border flows has become a great concern to policy makers.

The provision of answers to such questions has been the motivation of the Fourth International Conference on "Emerging Markets Finance" at Cass Business School in London, which was organized by the Emerging Markets Group (EMG) in collaboration with the European Central Bank (ECB) in May 2014. The conference this year has attracted 150 submissions from 19 countries (Germany, Canada, America, Italy, Spain, Japan, France, UK, Australia, China, Norway, Finland, Lebanon, Poland, Netherlands, Brazil, Thailand, Chile, Switzerland), nine of which have been selected to be included in this Special Issue following the usual refereeing process. The conference was sponsored, by *JIMF* in conjunction with The Frank J. Petrilli Centre for Research in International Finance at Fordham University, by the ECB and by Cass Business School. Blackrock, the multinational investment management corporation, funded the best paper award.

Before proceeding however, I would like to thank all those, who have contributed to the success of the conference. First of all I would like to thank Stelios Makrythakis and David Lodge, who were instrumental in our collaboration with the ECB. I would like to thank the Programme Committee, discussants and referees, who helped with the selection of papers. Furthermore, I would also like to thank Michael Melvin, from Blackrock, who has facilitated the sponsorship of the best paper award by Blackrock. Michael had until recently a very close association with *JIMF* and has been a keen supporter of all the EMG conferences. However, my greatest thanks go to Kees Koedijk, the Editor of *JIMF*, whose advice was most valuable throughout the process and to Nicole van Deijck-Rijnen, the Editorial Assistant, who oversaw the production of the Special Issue. Finally, I would also like to thank Matthieu Bussiere from

the Bank of France for his valuable advice on several issues related to the conference and for co-authoring this overview.

The purpose of this introduction is to bring out the connections of the papers and to provide a context for understanding the relevance and importance of each paper. The discussion of the papers will take place under three main areas: international capital flows, the impact of capital flows on financial markets, and external sector and domestic financial policies. The topic of cross border flows however, permeates all the papers, even if it is not the main topic examined.

## **2. International capital flows**

Emerging market economies are particularly sensitive to capital flows, regarding both the size and the composition of these flows. Gustavo Adler, Marie-Louise Djigbenou and Sebastian Sosa examine the retrenchment of international financial flows in emerging market economies following global financial shocks. To better inform the debate they focus on *gross* flows (distinguishing between domestic residents and foreigners) instead of following the more traditional approach, which focuses on *net* flows. Based on a panel vector-autoregressive (PVAR) approach estimated for 38 emerging market economies and using quarterly data that cover the period 1990Q1-2014Q2, they show that the distinction is relevant and that domestic residents play a stabilizing role. In particular, retrenchment by domestic residents in the wake of a global risk aversion shock will typically offset retrenchment by foreign residents (as the former contribute to increase net *inflows* and the latter to higher net *outflows*). In this case, gross inflows and gross outflows offset each other. Meanwhile, the authors show that the nature of the global shock matters as well, since this offsetting behavior does not take place after a global (i.e. US) monetary shock: in this case, gross inflows EMs fall, and domestic investors do not seem to repatriate foreign assets, thus not giving rise to a potentially offsetting effect. The authors also show that a real shock abroad, such as an increase in US economic growth,

maps into net capital inflows in EMEs (suggesting that the “good news” effect of higher growth in the US is larger than the induced rise in US interest rates). Finally, the authors do not stop at these aggregate responses but also consider the heterogeneity across countries and across flows, showing for instance that the level of international reserves matters (countries with more reserves register larger asset repatriation from local investors). Regarding the composition of financial flows, FDI flows tend to be less sensitive to global shocks than other types of flows, as intuition would suggest. These findings have important policy implications for the international effect of US monetary policy. They suggest that an exit from the exceptional measures put in place during the crisis would not necessarily be associated with sharp capital outflows from EMs if the exit (and the higher interest rates) reflects the endogenous response to improved economic conditions in the US.

Kate Phylaktis, Ana-Maria Fuertes and Cheng Yang also look at the volatility of international capital flows in EMs but take a complementary approach to Gustavo Adler et al., as they focus on bank flows and the issue of “hot money”. This issue has been particularly important in recent years and relates to the role of global banks in the transmission of international shocks (Cetorelli and Goldberg, 2011, 2012 a, b, Buch and Goldberg, 2014). The importance of bank flows in the global economy has been highlighted in previous research; in particular, Milesi-Ferretti and Tille (2011) showed that bank flows have been more affected than other flows during the global financial crisis. In the paper presented in this special volume, the authors use statistical techniques to evaluate the fickleness of international capital flows for a panel of emerging market economies, during the period 1988-2012. Specifically, they apply unobserved component models à-la Kalman filter to a set of 18 countries (nine Asian and nine Latin American countries) and find that bank flows have become increasingly temporary over time (by contrast with portfolio flows, whose “temporariness” has remained roughly constant). In particular, the temporariness of bank flows was higher during the period 1998-2012 than

during the preceding ten years. Interestingly as well, the authors complement these first results with “structural” state-space model estimates that account for so-called “push (global) factors” and “pull (domestic) factors” as determinants of permanent and transitory components. These alternative estimates provide a sense of the robustness of the results. Overall, the findings presented in the paper suggest that the different types of international capital flows have been dominated by hot money (and therefore prone to reversals) and underline the importance of global banks in the transmission of the global financial crisis to the emerging market economies.

Lucio Sarno, Ilias Tsiakas and Barbara Ulloa are also interested in the drivers of international portfolio flows and delve further into the respective role of common (“push”) versus country-specific (“pull”) factors. To assess their relative importance they rely on a Bayesian dynamic latent factor model, focusing on bond and equity flows from the US to 55 countries and using monthly data covering the period from January 1988 to November 2013. The use of Bayesian techniques is motivated by the high dimension of the model and yields feasible and efficient estimates. The results underline the overwhelming importance of push factors, which account for over 80% of the variation of the flows (86% for equities and 83% for bonds). The authors are able to relate the “push factors” to US variables (the US output gap, interest rates, stock market performance, and measures of market volatility and liquidity). Likewise, they relate the “pull factors” to country specific variables and find, in particular, that the output gap and the degree of capital account openness, as measured by the Chinn-Ito (2006) index, matter. The authors also present case studies that focus on three countries (China, India and Brazil). These results complement those of Forbes and Warnock (2012), who also conclude that push factors are more important, and Fratzscher (2012), who however uses very different data (from mutual and hedge funds). Overall, the paper by Lucio Sarno, Ilias Tsiakas and Barbara Ulloa is particularly rich in policy implications. The authors discuss in particular the

implications of their results from the policy prescriptions outlined by the IMF in 2012 regarding the use of capital controls (which represented a significant shift in perspective from the position it held previously).

The fourth paper included in this section, by Damien Puy, looks at institutional investors and uses data from mutual funds flows to explore the dynamics and the geography of contagion. The data, retrieved from EPFR Global, cover the period between 2001 and 2011: the dataset built for this paper contains more than 25.000 equity funds and 15.000 bond funds as of the last year of the sample, accounting for \$15 trillion of assets. The author uses a Bayesian dynamic latent factor model to decompose bond and equity flows into three components (world, regional and country-specific). The decomposition into three levels, instead of two, as is more usual, turns out to be important. The author's main findings emphasize the importance of "push factors": global and regional dynamics tend to dominate the dataset, whereas few countries receive or lose flows in isolation. In addition, the degree of financial stress and macroeconomic conditions in advanced economies seem to trigger most of the flows. Emerging market economies are also much more affected by these factors than advanced economies (even though the shocks originate from advanced economies). Another key finding of the paper is that political risk and the distance of the recipient country to the mutual fund are the two most important factors that explain contagion sensitivity. One noteworthy implication of this is that distance and political risk are the main criteria that foreign investors consider in assessing their decisions to invest in an emerging market economy.

### **3. Financial markets**

The second group of papers focuses on the impact of international capital flows on financial markets. Gino Cenedese and Enrico Mallucci investigate the factors that move international stock and bond markets, and specifically the role played by international mutual funds flows. First, they decompose international equity and bond market returns into different components:

changes in expectations of future dividends, inflation, real interest rates, exchange rates, and discount rates. Next, they relate these different return components to international mutual funds flows. The authors focus on 31 countries (18 advanced and 13 emerging economies) and analyze stock and bond markets in these countries. They find that news about future real cash payments is the main source of variation for bond and equity excess returns (whereas previous literature, focusing more on the US, typically found a bigger role for discount rates). Inflation news instead is the main driver of international bond returns. They also find that news about exchange rate changes and real interest rate changes does not contribute much to the variance of unexpected equity returns. In the next step, the authors relate these return components to international portfolio flows. They find, in particular, that negative discount rate shocks predict equity outflows. The authors go further and distinguish between types of investors (institutional investors and retail investors).

The second paper in this group is by Marco Lo Duca, Giulio Nicoletti and Ariadna Vidal Martinez analyze something very different how the US QE, that is purchases and holdings of MBS and Treasuries by the Fed impacted on the global corporate bond issuance. This question is essential for policy purposes as it highlights one of the key channels through which the exceptional measures put in place by the Fed affect economic conditions. The authors use quarterly data on bond issuance for non-financial corporations aggregated at a country level for a panel of 38 advanced and emerging economies, their sample covering the period 2000Q1-2013Q1. They find that corporate bonds did replace the assets removed from the market by the Fed's QE – in this case, the Large Scale Asset Purchases (LSAP). The Fed's action therefore contributed to portfolio rebalancing across assets, but also across countries, increasing corporate bond issuance globally. In their analysis, the authors distinguish across different effects from QE, what they refer to as “flow effects” (working through purchases) and “stock effects” (working through asset holdings). They also control for other factors that may affect



bond issuance in a series of robustness checks. These factors relate to domestic and global macroeconomic and financial conditions, especially weaknesses in domestic and foreign banks, which could have prompted corporations to issue more bonds to compensate for the associated reduction in loans. These robustness checks rely in particular on official (IMF WEO) forecasts. The authors present a counterfactual analysis showing that without QE corporate bond issuance in emerging market economies would have halved. These results could also be used (with the usual caveats) to infer the likely effects of the Fed's tapering.

### **3 External sector and domestic financial policies**

Given the sharp movements in international financial flows documented and analyzed in the papers of the previous sections, a natural question that arises is how this relates to domestic policies.

Enrique Alberola, Aitor Erce and José Maria Serena set out to address this question and focus on the link between international reserves and *gross* capital flow dynamics. Emerging economies have used various tools to manage the impact of the volatility of cross-border capital flows, ranging from macro-prudential policies to capital controls to prevent credit booms and financial instability. More recently, however, and especially after the Asian crisis, they have been accumulating foreign reserves to prevent excessive exchange rate misalignments and build up buffers against eventual sudden stops (Ostry et al., 2011). Similar to the paper of Gustavo Adler, Marie-Louise Djigbenou and Sebastian Sosa presented earlier, the authors are careful to take into account not just *net* flows but also *gross* flows. They proceed with an empirical investigation focusing on the role of international reserves as a stabilizer of international capital flows during periods of financial distress using quarterly data and estimating panel regressions for 63 countries over the period 1991-2010. They highlight very substantial heterogeneity in the way domestic residents respond to financial stress and can relate this cross-country heterogeneity to international reserves, which act as a buffer during

financial stress. The channel that they identify works as follows. During periods of financial stress, domestic residents disinvest from their investments overseas, and this process is facilitated when international reserves are higher. This contributes to offset the fall in foreign capital inflows associated with these periods of financial stress. This mechanism is another channel through which reserves act as a buffer (previous economic intuition focused more on the influence of reserves on foreign investors). These findings complement other results recently highlighted in the literature; for instance, Reinhart and Takeshi (2013) show that reserves mitigate the risk of bank runs (therefore putting the emphasis on domestic residents).

Atish R. Ghosh, Jonathan Ostry and Marcos Chamon complement the previous results by considering other instruments that help attenuate the impact of external shocks and volatile capital flows. Specifically, they focus on interest rate policy and (sterilized) FX interventions. They note that emerging market economies have gained credibility since the crisis-prone 1990s and therefore have more scope for using countercyclical macroeconomic policy. The authors estimate policy reaction functions by central banks and infer from there results that both types of policy measures (policy interest rate and foreign exchange intervention) have been used. More in particular, they estimate, for 15 EM economies inflation targeters, a Taylor rule that includes among the explanatory variables the lagged dependent variable, the difference between inflation expectations and the inflation target, the lagged output gap, and the change in the real effective exchange rate. The results suggest that the central banks considered in the panel respond to real exchange rate movements “above and beyond any impact on expected inflation”. The authors also compare different measures of reserve volatility across groups of countries (those that adopted an inflation targeting framework and the others) and find evidence that inflation targeters actively intervene in the FX markets (even though the authors are cautious as they only find suggestive evidence and not definite proofs). The results presented in the paper are consistent with the “fear of floating” pattern highlighted in Calvo and Reinhart

(2002). Through a survey of the literature, the authors recall that FX interventions tend to be more effective for emerging than for advanced countries.

Next, they return to the debate that opposes rules to discretion in this particular context, using a simple open economy two-period model with imperfect capital mobility as well as a richer (multi-period) version of this model, for which they provide simulations. Noticeably, they show that the choice between a fully discretionary monetary policy, and an inflation targeting regime depends on the volatility of the shocks. Another key result is that the two instruments are complementary: FX interventions improve welfare, irrespective of the regime (but the impact is larger under inflation targeting). Another point conveyed by the authors is that using both instruments jointly (i.e. using FX interventions in an inflation targeting regime) is the best possible combination for emerging market economies. Indeed, for EMs, credibility is often not fully established, such that sticking to an inflation targeting framework is very valuable; nonetheless, foreign exchange intervention is consistent with inflation targeting and even enhances credibility in their model.

While previous papers considered episodes of financial stress and capital flow volatility, the last paper in this section, and the final paper in this volume, by Alexandre Jeanneret and Slim Soussi, turns to episodes of outright default. The authors have built a dataset of sovereign defaults in 100 countries over the period from 1996 to 2012 and explore the determinants of these defaults empirically. They pay particular attention to the role of currency denomination; surprisingly, they report that the defaults are equally likely for local currency bonds and for foreign currency bonds. This result is surprising, at first sight, because one generally considers that governments will default less often on local currency bonds as they can print money and monetize their debt (while this is of course costly). However, they do find that economic and financial conditions matter and influence governments' defaults in a way that depends on the currency denomination (economic performance, or inflation, for instance,

affect the default probabilities differently depending on the currency denomination). Therefore, currency denomination is a relevant factor to consider; the variation in default probability that is explained empirically increases substantially when currency denomination is accounted for. Another very noteworthy result presented in the paper is that global factors (like the VIX or US specific variables) do not explain much of the occurrence of sovereign defaults; local conditions are the most important. This paper therefore contributes to the debate on the development of local currency bond markets. It also contributes to the academic literature on defaults, which focused on related but different issues, such as the role of credit rating agencies, or the role of sovereign credit spreads.

#### **4 Conclusions**

We hope in this volume we have highlighted some topical issues in international finance, which are most closely related to EMs. Over the years the emphasis in these Special issues in *JIMF* on Emerging Markets Finance has shifted with times reflecting the concerns of both investors and policymakers, from investigating the impact of liberalization on financial decisions and the economy in 2006 to the impact of poor institutions, political uncertainty, lack of transparency and poor corporate governance in 2009 to the impact of financial crises in 2012. The focus of the papers in this volume relate more closely to international capital flows and the challenges the governments face in managing the impact on their economies. The increased financial integration over the last two decades in conjunction with the resulting increase in the level and volatility of international capital flows (portfolio flows, banking flows and FDI) have increased emerging economies' exposure to global financial shocks.

Understanding the dynamic determinants of international capital flows can help countries design effective policies, including structural reforms, which increase the capacity of their capital markets to handle substantial amounts of capital flows and improvements in the regulatory framework; macroeconomic policies, such as accumulating reserves, or allowing

their currency to appreciate, and imposing different types of capital controls to mitigate the unwelcome impact on their economies (IMF, 2011). The findings in some of the papers in this volume have had something to say with regard to the above policy options. For example, Aberola et al find that during periods of financial stress it is good for countries to have high international reserves not only to mitigate the risk of bank runs found in other studies but also to encourage domestic residents to disinvest from their investments abroad offsetting in this way the fall in foreign capital inflows. On the other hand, the analysis by Sarno et al. and Phylaktis et al. lends support to the use of capital controls as an effective tool to manage capital flows.

Another issue examined in some of the papers is the effects of QE and the impact of tapering on capital flows and financial markets. There is an optimistic note in the analysis by Gustavo Adler et al. who find that tapering (and higher interest rates) might not result on capital outflows from EMEs if it reflects improved economic conditions in the US. According to Gino and Marlucci the resulting revisions in expectations about future interest rates in the process of tapering will affect international bond flows to EMEs more than equity flows because of their greater sensitivity to future interest rates.

At the time of writing this overview the speculation about the timing of the Fed's and the Bank of England's tapering continued. In contrast, there were rumors that the ECB would extend its QE, in the light of the slowdown of the economic growth in China and in the other emerging markets. It seems that the globalized world economy is entering a new phase of interdependence between emerging and advanced economies. This will stimulate more research in these areas, which will be covered in future EMG conferences and workshops. In the meantime, it is hoped that the topics in this volume will prove of interest not only to researchers, but also to practitioners and regulators as well.

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